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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/531,061

04/12/2005

Yoshinaru Kono

OHT-0028

2562

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EXAMINER

LAMB, CODY W

ART UNIT

PAPER NUMBER

2609

MAIL DATE

DELIVERY MODE

08/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/531,061

Applicant(s)

KONO, YOSHINARU

Examiner

Cody W. Lamb

Art Unit

2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04/12/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 04/12/2005.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 7 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by James Luther et al. (US Patent No. 6536956) referred herein as Luther.

Regarding claim 1, Luther teaches a ferrule apparatus with one or more fine holes for an optical fiber to be inserted into (column 3, lines 30-33), and with multiple components being connected in the insertion direction of the optical fiber (abstract).

Regarding claim 2, Luther teaches the limitations of claim 1. Luther also teaches the embodiment where the components are arranged in a substantially straight line (abstract).

Regarding claims 3/1 and 3/2, Luther teaches the limitations of claims 1 and 2. Luther also teaches an embodiment where one or more of the holes of the ferrule components are expanded in a tapered form on at least one end (abstract and figure 3).

Regarding claim 7, Luther teaches a ferrule apparatus where the ferrule has one or more fine holes for an optical fiber to be inserted into (column 3, lines 30-33), where one or more of the holes are expanded in a tapered form (abstract and figure 3), and

where there are multiple ferrule components to be connected together in the insertion direction of the optical fiber (abstract).

Regarding claim 11, Luther teaches a ferrule design with one or more fine holes for an optical fiber to be inserted into (column 3, lines 30-33), and with multiple components connected in the insertion direction of the optical fiber (abstract).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luther in view of Katsuki Suematsu et al. (US Patent Application Publication No. 2002/0076168) referred herein as Suematsu.

Regarding claims 4/1 and 4/2, Luther teaches the limitations of claims 1 and 2. However, Luther does not teach an embodiment where the ferrule component has an adhesive filling recess or an injection groove for injecting an adhesive from the outside to the recess. Suematsu teaches a ferrule apparatus that has grooves for injecting an adhesive resin into the recess (paragraphs 3 and 29 and figure 1, items 12a and 12b). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the teaching of Luther with the teaching of Suematsu for securely adhering the optical fibers in the fiber holes (paragraph 6).

Regarding claim 8, Luther teaches the limitations of claim 7. However, Luther does not teach an embodiment where the ferrule component has an adhesive filling recess or an injection groove for injecting an adhesive from the outside to the recess. Suematsu teaches a ferrule apparatus that has grooves for injecting an adhesive resin into the recess (paragraphs 3 and 29 and figure 1, items 12a and 12b). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the teaching of Luther with the teaching of Suematsu for securely adhering the optical fibers in the fiber holes (paragraph 6).

Regarding claim 12, Luther teaches the limitations of claim 11. However, Luther does not teach an embodiment where the ferrule has been manufactured to a width of about 3 mm or smaller along an arranging direction of the perforated fine holes. Suematsu teaches an embodiment where the width of the ferrule between the two fiber holes is restricted to a range of 1.5 mm to 4 mm (paragraph 5). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teaching of Luther with the teaching of Suematsu to facilitate the insertion of guide pins (paragraph 5).

5. Claims 5, 6, 9/7 and 10/7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luther in view of Yukinori Miyake et al. (US Patent Application Publication No. 2002/0122634) referred herein as Miyake.

Regarding claims 5/1 and 5/2, Luther teaches the limitations of claims 1 and 2. However, Luther does not teach the ferrule component having an engagement portion

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engaged with a connector housing in which the ferrule is set. Miyake teaches an engagement portion (figure 4, item 12) connecting the ferrule to an outer structure (paragraph 9). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teaching of Luther with the teaching of Miyake for preventing the ferrule from falling off the front end of the structure (paragraph 9).

Regarding claims 6/1 and 6/2, Luther teaches the limitations of claims 1 and 2. However, Luther does not teach an embodiment where the ferrule component contains zirconia ceramics. Miyake teaches an embodiment where the ferrule component contains zirconia ceramics (paragraph 6). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teaching of Luther with the teaching of Miyake for creating a cylindrical ferrule that can be coated with an attenuation film (paragraph 6).

Regarding claim 9/7, Luther teaches the limitations of claim 7. However, Luther does not teach the ferrule component having an engagement portion engaged with a connector housing in which the ferrule is set. Miyake teaches an engagement portion (figure 4, item 12) connecting the ferrule to an outer structure (paragraph 9). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teaching of Luther with the teaching of Miyake for preventing the ferrule from falling off the front end of the structure (paragraph 9).

Regarding claim 10/7, Luther teaches the limitations of claim 7. However, Luther does not teach an embodiment where the ferrule component contains zirconia

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ceramics. Miyake teaches an embodiment where the ferrule component contains zirconia ceramics (paragraph 6). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teaching of Luther with the teaching of Miyake for creating a cylindrical ferrule that can be coated with an attenuation film (paragraph 6).

6. Claims 9/8 and 10/8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luther and Suematsu as applied to claim 8 above, and further in view of Miyake.

Regarding claim 9/8, Luther and Suematsu teach the limitations of claim 8. However, Luther and Suematsu do not teach the ferrule component having an engagement portion engaged with a connector housing in which the ferrule is set. Miyake teaches an engagement portion (figure 4, item 12) connecting the ferrule to an outer structure (paragraph 9). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teaching of Luther and Suematsu with the teaching of Miyake for preventing the ferrule from falling off the front end of the structure (paragraph 9).

Regarding claim 10/8, Luther and Suematsu teach the limitations of claim 8. However, Luther and Suematsu do not teach an embodiment where the ferrule component contains zirconia ceramics. Miyake teaches an embodiment where the ferrule component contains zirconia ceramics (paragraph 6). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was

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made to combine the teaching of Luther with the teaching of Miyake for creating a cylindrical ferrule that can be coated with an attenuation film (paragraph 6).

Conclusion

7. Any response to this Office Action should be faxed to (571) 273-8300 or mailed to:

Commissioner for Patents,
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

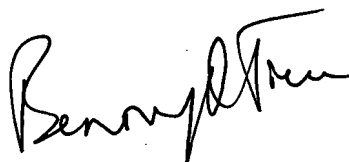
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cody W. Lamb whose telephone number is 571-270-1797. The examiner can normally be reached on Monday - Friday 8 a.m. - 5 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benny Tieu can be reached on 571-272-7490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Cody W. Lamb
Examiner, Art Unit 2609
August 20, 2007

A handwritten signature in black ink, appearing to read "Benny Q. Tieu".

BENNY Q. TIEU
SPE/TRAINER